CLAIMS

We claim:

1   1.   A method of decoding a bitstream encoded via a plurality of encoders, the

2   bitstream arranged in portions, the method comprising:

3   identifying the portions within the bitstream; and

4   routing the identified portions to one of a plurality of decoders based on a

5   portion model associated with each identified portion.

1   2.   The method of claim 1, wherein each portion model is assigned from a plurality

2   of predetermined models.

1   3.   The method of claim 2, wherein if a content of a portion does not match a

2   predetermined model, then the portion is assigned a generic model.

1   4.   The method of claim 3, wherein each decoder of the plurality of decoders is

2   optimized for one of the predetermined models.

1   5.   The method of claim 4, wherein the plurality of decoders further comprises a

2   generic decoder.

1   6.   The method of claim 5, wherein routing the identified portions to one of a

2   plurality of decoders based on a portion model associated with each identified portion

3   further comprises routing the identified portions to the generic decoder if the identified

4   portions have the generic model.

1   7.   A method of decoding a bitstream divided into portions, each portion being

2   encoded by an encoder of a plurality of encoders, the encoder being chosen based on a

3   profile of each segment, the method comprising:

4   receiving the bitstream at an input switch;

5   routing each bitstream portion from the input switch to a decoder of a plurality

6   of decoders based on the portion model;

7   decoding each bitstream portion based on which encoder encoded that portion

8   of the bitstream; and

9   outputting each decoded bitstream portion.

1   8.   The method of decoding a bistream divided into segment of claim 7, further

2   comprising:

3   receiving an output from each of the plurality of decoders at an output switch;

4   and

5   outputting a decoded bitstream from the output switch.

1   9.   The method of claim 8, wherein the portion model is chosen from the group of

2   models consisting of action, slow, opposing glances, scene detail, establishing shot,

3   camera handling, animation mixture, and light changes.

1   10.   The method of claim 9, wherein the portion model further comprises

2   information associated with a source format, scene concepts, properties of the scene,

3   camera operations and special effects.

1   11.   A method of decoding a bitstream divided into segments, each segment being

2   encoded by one encoder of a plurality of encoders, the one encoder being chosen based

3   on a profile of each segment and the plurality of encoders including a generic encoder,

4   the method comprising:

5   receiving the bitstream at an input switch;

6   routing each bitstream segment from the input switch to one decoder of a

7   plurality of decoders based on the segment profile, each decoder of the plurality of

8   decoders being associated with one of a plurality of profiles and the plurality of decoders

9   including a generic decoder;

10   routing the bitstream segment to the generic decoder if the bitstream segment

11   does not have a profile; and

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12   decoding each bitstream segment using one decoder of the plurality of decoders,

13   wherein each segment having a profile is decoded via a decoder associated with that

14   profile, and wherein a segment not having an associated profile is decoded using the

15   generic decoder.

1   12.   A method of encoding and decoding video content, the method using a plurality

2   of encoders each associated with one of a plurality of content models and including a

3   generic encoder associated with a generic content model, the method further uses a

4   plurality of decoders each associated with one of the plurality of content models and

5   including a generic decoder associated with the generic content model, the method

6   comprising:

7   extracting a portion from the video content;

8   mapping the portion to associate a model from the plurality of models;

9   if a model is mapped to the portion:

10   encoding the portion using an encoder associated with the

11   portion model;

12   if a model is not mapped to the model:

13   encoding the portion using the generic encoder;

14   transmitting the portion to a switch;

15   if a model is mapped to the portion:

16   routing the portion via the switch to a decoder associated with the

17   portion model; and

18   if a model is not mapped to the portion:

19   routing the portion via the switch to the generic decoder.

1   13.   The method of encoding and decoding video content of claim 12, further

2   comprising:

3   connecting an output from each decoder of the plurality of decoders to a second

4   switch; and

5   receiving output from each decoder of the plurality of decoders to assemble the

6   decoded segments for display.

1   14.   A method of decoding a bitstream, the bitstream divided into a plurality of

2   portions including description portions and video content portions, each video content

3   portion having an associated model which is either a generic model or a predetermined

4   model from a plurality of models related to the video content, the method comprising:

5   determining whether each portion is a description portion or a video content

6   portion;

7   if a portion is determined to be a description portion:

8   decoding the description portion using a first decoder; and

9   if a portion is determined to be a video content portion:

10   determining whether the associated model of the video content portion is

11   the generic model or one of the predetermined models from the plurality of models; and

12   if the associated model is a generic model:

13   decoding the portion using a generic decoder; and

14   if the associated model is one of the predetermined models:

15   decoding the portion using a decoder chosen from a plurality of

16   decoders, each decoder of the plurality of decoders being associated with one of the

17   predetermined models from the plurality of models.

1   15.   The method of decoding a bitstream of claim 14, further comprising:

2   using decoded descriptions from the description portions to determine whether

3   the associated model of the video content portion is the general model or one of the

4   predetermined models from the plurality of models.

1   16.   The method of claim 15, wherein a portion of the bitstream is a segment.

1   17.   The method of claim 15, wherein a portion of the bitstream is a subsegment.

1   18.   The method of claim 15, wherein a portion of the bitstream is a region of

2   interest.

1   19.   A method of decoding a bitstream, the bitstream being divided into a plurality of

2   video content segments, each video content segment having an associated model which

3   is either a generic model or a predetermined model from a plurality of models related to

4   the video content, the method comprising:

5   determining whether the associated model of each video content segment is the

6   generic model or one of the predetermined models from the plurality of models; and

7   if the associated model is a generic model:

8   decoding the segment using a generic decoder; and

9   if the associated model is one of the predetermined models:

10   decoding the segment using a decoder chosen from a plurality of

11   decoders, each decoder of the plurality of decoders being associated with one of the

12   predetermined models from the plurality of models.

1   20.   The method of decoding a bitstream of claim 19, wherein the predetermined

2   models relate to concepts of a segment, properties of a segment, camera operation in a

3   segment or special effects in a segment.

1   21.   A decoded bitstream, decoded according to the method of claim 1.

1   22.   A decoded bitstream, decoded according to the method of claim 7.

1   23.   A decoded bitstream, decoded according to the method of claim 11.

1   24.   A decoded bitstream, decoded according to the method of claim 12.

1   25.   A decoded bitstream, decoded according to the method of claim 14.

1   26.   A decoded bitstream, decoded according to the method of claim 19.